Technical Learning Directory 2026

Empowering Growth, Shaping a Sustainable Future

Welcome to the Technical Learning Directory

Learning is a vital part of professional growth in any workplace and even more so here at Sarawak Energy.

As a company committed to going beyond great and excelling at every level, we want all our people to embrace a mindset of continuous learning and improvement.

Sarawak Energy offers a comprehensive range of technical learning programmes, many of which are facilitated by subject matter experts, specialists and experienced industry practitioners.

This directory provides an overview of these technical learning opportunities and aims to support you in planning your learning journey throughout the year.

I encourage you to take the time to explore this document and make full use of the programmes available.

Together, let us continue to make Sarawak Energy a greater place to work.

Christina Lai Nien Yien
General Manager
Learning & Development and Capability Management

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Programme Schedule 2026

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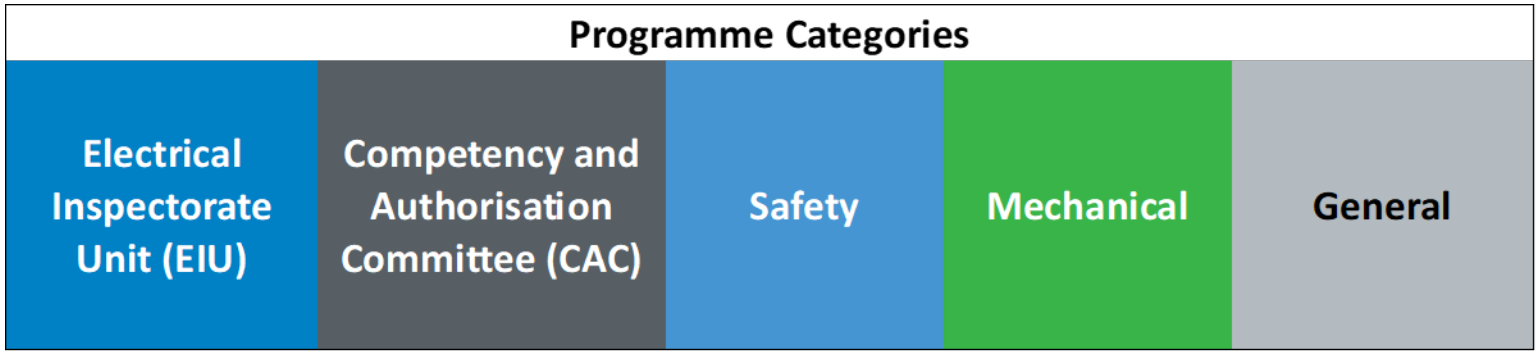
Introducing the Programme Schedule 2026

The tables below provide a comprehensive overview of all programmes that the Sarawak Energy Learning Centre (SELC) will offer throughout 2026. The number of sessions for each programme is determined based on business needs. These programmes are designed to enhance your technical capabilities, enabling you to contribute productively to the Company's projects and operations, doing your part to keep the lights on for Sarawak.

Each programme's theory (T) and practical (P) sessions are scheduled sequentially. Practical sessions are only open to participants who have completed the corresponding theory session. No separate registration is required, as eligible participants will be automatically assigned to a practical session by the programme administrator.

Employees will be able to register through the links in the tables.
Non-employees will have to register for the listed programmes and exams via the QR code on this page.

If all planned sessions for a particular programme are fully subscribed, **employees** may still register via the Learning Management System (LMS) in Sarawak Energy People System (SEPS) to be placed on the waitlist.



Colour Coding Legend

Registration for external participants (non-employees)

Electrical Inspectorate Unit (EIU) Programmes

Code	EIU Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
E309	Electricity Ordinance & Electricity Rules (EOER)	1	-	Link	T: 24 Feb		T: 20 May	T: 19 Aug		
E211	Chargeman L1 Module 1	4	-	Link	T: 5 – 8 Jan	T: 30 Mar – 2 Apr	T: 8 – 11 Jun			
E212	Chargeman L1 Module 2	4	-	Link	T: 12 – 15 Jan	T: 6 – 9 Apr	T: 15 – 18 Jun			
E213	Chargeman L1 Module 3	3	2	Link	T: 19 –21 Jan P: 26 – 27 Jan	T: 13 – 15 Apr P: 20 – 21 Apr	T: 22 – 24 Jun P: 29 – 30 Jun			
E223	Chargeman L2 Overhead Lines	2	2	Link	T: 12 – 13 Jan P: 15 – 16 Jan/ 19 – 20 Jan	T: 16 – 17 Apr P: 20 –21 Apr/ 22 – 23 Apr	T: 8 – 9 Jun P: 11 – 12 Jun /15 – 16 Jun	T: 20 – 21 Jul P: 23 – 24 Jul/ 27 – 28 Jul		
E604	Chargeman L2 & H2 U/G Cable Laying	2	1	Link		T: 5 – 6 Mar P: 9/10 Mar	T: 14 – 15 May P: 18/19 May	T: 3 – 4 Aug P: 6/7 Aug		
E703	Chargeman L3 Generators & Synchronising	2	1	Link	T: 2 – 3 Feb P: 5/ 6 Feb		T: 4- 5 May P: 7/ 8 May	T: 13 – 14 Jul P: 16/ 17 Jul		

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Electrical Inspectorate Unit (EIU) Programmes

Code	EIU Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
E521	Chargeman H1 Module 1	4	-	Link		T: 13 – 16 Apr	T: 15 – 18 Jun			
E522	Chargeman H1 Module 2	4	-	Link		T: 20 – 23 Apr	T: 22 – 25 Jun			
E523	Chargeman H1 Module 3	4	-	Link		T: 27 – 30 Apr		T: 29 Jun – 2 Jul		
E524	Chargeman H1 Module 4	3	1	Link			T: 4 –6 May P: 11/ 12 May	T: 6 – 8 Jul P: 13/ 14 Jul		
E405	Chargeman H2 Overhead Lines	2	1	Link	T: 2 – 3 Feb P: 5/ 6 Feb	T: 30 – 31 Mar P: 7/ 8 Apr	T: 23 – 24 Jun P: 29/ 30 Jun			
E602	11kV Underground Cable-Jointing	1	2	Link	T: 14 Jan P: 26 – 27 Jan		T: 22 Jun P: 25 – 26 Jun			
E603	33kV Underground Cable-Jointing	1	2	Link				T: 5 Aug P: 13 – 14 Aug		

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Competency and Authorisation Committee (CAC) Programmes

Code	CAC Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
E200	Low Voltage Distribution System Practices and Switching	2	1	Link	T: 5 – 6 Jan P: 7/ 8/ 9 Jan	T: 16 – 17 Mar P: 25/ 26/ 27 Mar		T: 6 – 7 Jul P: 15/ 16/ 17 Jul	T: 21 – 22 Sept P: 28/ 29/ 30 Sept	T: 5 – 6 Nov P: 9/ 10/ 11 Nov
E202	LV Fuse Switching	1	1	Link			T: 14 May P: 15 May			
E203	Switching for Rural Power Stations	3	1	Link		T: 2 – 4 Mar P: 6 Mar				
E500	11kV Switching	3	1	Link	T: 12 – 14 Jan P: 16 Jan	T: 6 – 8 Apr P: 10 Apr		T: 6 – 8 Jul P: 10 Jul	T: 12 – 14 Oct P: 16 Oct	
E502	Switching for Major Power Stations	3	-	Link				T: 1 – 3 Jul		
E512	Refresher for Power Station Switching	2	-	Link			T: 18 – 19 May			
E503	33kV Switching	3	-	Link	T: 2 – 4 Feb		T: 15 – 17 Jun		T: 28 – 30 Sept	

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Competency and Authorisation Committee (CAC) Programmes

Code	CAC Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
E505	Refresher For HV Switching	2	-	Link		T: 16 – 17 Mar	T: 11 – 12 May	T: 27 – 28 Jul	T: 26 – 27 Oct	
E511	132/275kV Switching	4	-	Link		T: 9 – 12 Mar				T: 2 – 5 Nov
E506	Refresher for 132/275kV Switching	3	-	Link			T: 22 – 24 Jun			
E222	Overhead Live Line Work	1	1	Link	T: 23 Feb P: 25/ 26/ 27 Feb		T: 4 May P: 6/ 7/ 8 May			
E514	Street Lighting Maintenance	1	-	Link		T: 24 Apr				
E808	Distribution Protection Control & Instrumentation	2	-	Link				T: 26 – 27 Aug		
E809	Transmission Protection Control & Instrumentation	2	-	Link		T: 14- 15 Apr			T: 17 – 18 Sept	

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Safety Programmes

Code	Safety Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
S100	First-Aid Programme in Kuching	1	2	Link	T: 12 Jan P: 13 – 14 Jan/ 15 – 16 Jan	T: 9 Mar P: 10 – 11 Mar/ 12 – 13 Mar T: 6 Apr P: 7 – 8 Apr/ 9 – 10 Apr T: 20 Apr P: 21 - 22 Apr/ 23 – 24 Apr	T: 19 May P: 19 – 20 May/ 21 – 22 May T: 8 Jun P: 9 – 10 Jun/ 11 – 12 Jun T: 22 Jun P: 23 – 24 Jun/ 25 – 26 Jun	**T: 29 Jun** **P: 30 Jun – 1 Jul/** **2 – 3 Jul** T: 27 Jul P: 28 – 29- Jul/ 30 – 31 Jul T: 10 Aug P: 11 – 12 Aug/ 13 – 14 Aug	T: 7 Sept P: 8 – 9 Sept/ 10 – 11 Sept	
	First-Aid Programme in Sibu				T: 19 Jan P: 20 – 21 Jan/ 22 – 23 Jan T: 26 Jan P: 27 – 28 Jan	T: 2 Mar P: 3 – 4 Mar/ 5 – 6 Mar	T: 4 May P: 5 – 6 May		T: 21 Sept P: 22 – 23 Sept	
	First-Aid Programme in Bintulu					T: 16 Mar P: 17 – 18 Mar/ 19 – 20 Mar	T: 11 May P: 12 – 13 May/ 14 – 15 May	T: 3 Aug P: 4 – 5 Aug/ 6 – 7 Aug		
	First-Aid Programme in Miri				T: 9 Feb P: 10 – 11 Feb P: 12 – 13 Feb	T: 13 Apr P: 14 – 15 Apr/ 16 – 17 Apr		T: 13 Jul P: 14 – 15 Jul		

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Safety Programmes

Code	Safety Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
S200	Safety Awareness for Working Near Electrical Installations	1	-	Link		T: 30 Apr	T: 10 Jun		T: 14 Oct	
S300	Safety Awareness for Working Near Power Stations (Electrical)	1	-	Link			T: 26 Jun			
S401	Safety Awareness for Working Near 33/11KV Overhead Lines	1	-	Link			T: 5 May		T: 1 Sept	
S402	Safety Awareness for Working Near EHV Transmission Lines	1	-	Link					T: 21 Sept	
S500	Safety Awareness for Working Near Substations	1	-	Link			T: 8 May	T: 17 Jul		
S501	Safety Awareness for Working Near EHV Substation	1	-	Link			T: 15 May			

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Mechanical Programmes

Code	Mechanical Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
SBOT	Steam Boiler Operator Training	3	2	Link		T: 23 – 25 Mar P: 26 – 27 Mar	T: 4 – 6 May P: 7 – 8 May	T: 6 – 8 Jul P: 9 – 10 Jul	T: 21 – 23 Sept P: 24 – 25 Sept	
SBORW	Steam Boiler Operator Revision Workshop	1	1	Link		T: 22 Apr P: 23 Apr	T: 25 Jun P: 26 Jun	T: 5 Aug P: 6 Aug	T: 28 Oct P: 29 Oct	

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

General Programmes

Code	General Programme Title	No. of Days		SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
		Theory (T)	Practical (P)							
E206	Low Voltage Main Switchboard Requirement & Testing	2	-	Link				T: 10 – 11 Aug		
E209	Electrical Power System Fundamentals for Non-Technical Personnel	2	-	Link		T: 23 – 24 Apr				
E225	Meter Inspection, Installation and Disconnection	1	-	Link			T: 15 May			
E509	Substation Routine Maintenance	2	-	Link			T: 4 – 5 May			
E406	High Voltage Overhead Lines Testing & Commissioning	1	1	Link		T: 6 Apr P: 9/ 10 Apr				
E904	Introduction to Sarawak Energy Power System Module 2: Cables and Lines	2	-	Link		T: 1 – 2 Apr			T: 24 – 25 Sept	
E905	Introduction to Sarawak Energy Power System Module 3: Generators and Protection	2	-	Link		T: 6 – 7 Apr			T: 28 – 29 Sept	
E906	Introduction to Sarawak Energy Power System Module 4: High Voltage Systems	2	-	Link		T: 13 – 14 Apr			T: 1 – 2 Oct	

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Theory Examinations for EIU & CAC Programmes

Code	Theory Examination Title	No. of Days	SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
T-EOER	Electricity Ordinance & Electricity Rules	1	Link		11 Mar	6 May	8 Jul	9 Sept	4 Nov
T-A	Chargeman L1	1	Link		11 Mar	6 May	8 Jul	9 Sept	4 Nov
T-A2	Chargeman L2 Overhead Lines	1	Link		11 Mar	6 May	8 Jul	9 Sept	4 Nov
T-LHUG	Chargeman L2 & H2 U/G Cable Laying	1	Link	4 Feb	8 Apr	17 Jun	5 Aug	7 Oct	
T-L3	Chargeman L3 Generators & Synchronising	1	Link	4 Feb	8 Apr	17 Jun	5 Aug	7 Oct	
T-H	Chargeman H1	1	Link	4 Feb	8 Apr	17 Jun	5 Aug	7 Oct	
T-A3	Chargeman H2 Overhead Lines	1	Link	4 Feb	8 Apr	17 Jun	5 Aug	7 Oct	
T-G	Grading of 11kV Cable Jointers	1	Link	4 Feb	8 Apr	17 Jun	5 Aug	7 Oct	
T-G33	Grading of 33kV Cable Jointers	1	Link		11 Mar	6 May	8 Jul	9 Sept	4 Nov
T-OLL	Overhead Live Line Work	1	Link		11 Mar	6 May	8 Jul	9 Sept	4 Nov

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Practical Examinations for EIU & CAC Programmes

Code	Practical Examination Title	No. of Days	SEPS Link	Jan – Feb	Mar – Apr	May – Jun	Jul – Aug	Sept – Oct	Nov – Dec
P-A	Chargeman L1	1	Link	28/ 29/ 30 Jan	27/ 28/ 29 Apr		6/ 7/ 8 Jul		
P-A2	Chargeman L2 Overhead Lines	1	Link	21/ 22/ 23 Jan	27/ 28/ 29 Apr	17/ 18/ 19 Jun	29/ 30/ 31 Jul		
P-LHUG	Chargeman L2 & H2 U/G Cable Laying	1	Link		12/ 13 Mar	21/ 22 May	17/ 18 Aug		
P-L3	Chargeman L3 Generators & Synchronising	1	Link	24/ 25/ 26/ 27 Feb		11/ 12/ 13/ 14 May	27/ 28/ 29/ 30 Jul		
P-H	Chargeman H1	1	Link			18/ 19/ 20 May	20/ 21/ 23 Jul		
P-A3	Chargeman H2 Overhead Lines	1	Link	9/ 10/ 11 Feb	13/ 14/ 15 Apr		1/ 2/ 3 Jul		
P-G	Grading of 11kV Cable Jointers	2	Link	29 – 30 Jan			9 – 10 Jul		
P-G33	Grading of 33kV Cable Jointers	2	Link				20 – 21 Aug		
P-OLL	Overhead Live Line Work	1	Link		2/ 3/ 4 Mar	11/ 12/ 13 May			

Note: Employees can register for these programmes through the links provided. Non-employees must register through the QR code provided on page 5. Please note that for certain programmes, participants from one theory session may be divided into two separate practical sessions on different dates.

Appendix 1: Programme Details

Electricity Ordinance and Electricity Rules 1999 (EOER)

E309

1 Day

Learning Outcomes

By completing this programme, participants will gain the necessary knowledge and qualifications to sit for the Electricity Ordinance and Electricity Rules (EOER) 1999 examination.

Contents

- Sarawak Electricity Ordinance
- The Electricity Rules, 1999

Target Groups

Applicants who intend to sit for the EOER examination as required by the Electrical Inspectorate Unit (EIU)

Chargeman L1 Module 1

E211

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of statutory requirements, electrical terminology, and firefighting equipment – becoming qualified to sit for the EIU Chargeman L1 examination.

Contents

- The Electricity Rules, 1999
- Fire Fighting Systems
- Scope, Objectives, and Fundamental Requirements for Safety
- General Requirements for Earthing and Bonding
- Isolation and Switching
- Safety and Protection Measures
- Inspection and Testing
- Sizing of Conductors

Target Groups

Technical personnel who intend to apply for the EIU Chargeman L1 certification

Chargeman L1 Module 2

E212

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of customer installations, related equipment, cables and their applications, as well as air-conditioning and street lighting systems – qualifying them to sit for the EIU Chargeman L1 examination.

Target Groups

Technical personnel who intend to apply for the EIU Chargeman L1 certification

Contents

- Consumer Installation
- Electrical Measuring and Testing Equipment
- Air Conditioner
- Protective Equipment for Low Voltage Installations
- Street Lighting
- Cables and Applications

Chargeman L1 Module 3

E213

5 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of batteries, the operation and maintenance of main switchboards, and motor control equipment. They will also engage in practical exercises focused on installing various types of motor starters – qualifying them to sit for the EIU Chargeman L1 examination.

Target Groups

Technical personnel who intend to apply for the EIU Chargeman L1 certification

Contents

- Overview of:
  - Batteries
  - Main Switchboard Equipment Checking
  - Transformers
  - Motor and Controlling Equipment
- Practical Exercises

Chargeman L2 Overhead Lines

E223

4 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge of low-voltage overhead line requirements in accordance with relevant regulations, qualifying them to apply for the EIU Chargeman L2 Overhead Lines (OH) examination.

Target Groups

Linesmen with at least two years of working experience who intend to apply for the EIU Chargeman L2 Overhead Lines (OH) Certification

Contents

- Overview of OSHA (Amendment) Act 2022
- The Electricity Rules, 1999
- Sarawak Energy Electrical Safety Rules
- Overhead Construction and Design Manual
- Various Operational and Safety Procedures and Processes
- Safety Practices for Working at Height Using Extension Ladders and Pole Top Rescue

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Chargeman L2 & H2 Underground Cable Laying

E604

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of Sarawak Energy's cable laying standards and requirements – qualifying them to sit for the EIU Chargeman L2 and H2 Underground Cable-Laying examinations.

Target Groups

Technical personnel involved in projects with or maintenance of underground cables who intend to apply for EIU Chargeman L2 & H2 cable laying certification

Contents

- Types of Underground Cables
- Procedures and Requirements for the Laying of High and Low Voltage Cables
- Direct Laid and Duct Laid Systems
- Cable Sealing Methods
- Sarawak Energy's Standard Cable Trenches, Joint Pit and Cable Markers

Chargeman L3 Generators and Synchronising

E703

3 Days

Learning Outcomes

By completing this programme, participants will gain theoretical and practical knowledge of generator operations and synchronising – qualifying them to sit for the EIU Chargeman L3 examination.

Contents

- Overview of:
  - Statutory and Safety Requirements
  - Generators and Power System Operations
- Practical Exercises

Target Groups

Technical personnel who operate or maintain generators who intend to apply for EIU Chargeman L3 certification

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Chargeman H1 Module 1

E521

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of statutory requirements and safety practices for high-voltage installations, substations, and substation accessories – qualifying them to sit for the EIU Chargeman H1 examination.

Contents

- Relevant Statutory Requirements and Safety Rules
- Different Types of HV Substation
- Safety Practices for HV Equipment
- Fire Fighting System
- Remote Supervisory System
- SCADA System

Target Groups

Technical personnel who hold an EIU Chargeman L1 certificate and intend to apply for an EIU Chargeman H1 certification

Chargeman H1 Module 2

E522

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of various types of high-voltage (HV) switchgears and their switching operating procedures – qualifying them to sit for the EIU Chargeman H1 examination.

Target Groups

Technical personnel who hold an EIU Chargeman L1 certificate and intend to apply for an EIU Chargeman H1 certification

Contents

- Overview of HV Switchgears and Their Functions
- HV Indoor Substation with Air Insulated Switchgears (AIS)
- Vacuum Circuit Breakers and Related Tests
- Direct Charge Power Supply
- Switching Operating Procedures and Simulations
- Ring Main Unit (RMU) Substation Maintenance

Chargeman H1 Module 3

E523

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of power transformers, voltage regulating devices, and earthing systems for 11kV distribution networks – qualifying them to sit for the EIU Chargeman H1 examination.

Target Groups

Technical personnel who hold an EIU Chargeman L1 certificate and intend to apply for an EIU Chargeman H1 certification

Contents

- Overview of HV Transformers
- Design and Operation of Power Transformers
- Phase Shifting Transformers
- Voltage Control and Power Factor Correction
- HV Capacitor Bank, Static VAR compensator (SVC) and Reactors
- Voltage Regulators
- Earthing
- 11kV Consumer Installation

Chargeman H1 Module 4

E524

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of key high-voltage (HV) equipment testing and commissioning procedures. They will also learn to identify HV faults, apply preventive measures, and understand protection and control systems – qualifying them to sit for the EIU Chargeman H1 examination.

Target Groups

Technical personnel who hold an EIU Chargeman L1 certificate and intend to apply for an EIU Chargeman H1 certification

Contents

- General Conditions for Testing and Commissioning of HV Equipment
- Circuit Breaker and Transformer Testing
- HV Cables
- 33kV Gas Insulated Switchgear (GIS)
- Siemens *DA 33kV GIS
- HV Faults and Preventive Measures
- HV Equipment Protection and Control

Chargeman H2 Overhead Lines

E405

3 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge and skills to ensure compliance with relevant regulations and best practices when working on high-voltage overhead lines – qualifying them to sit for the EIU Chargeman H2 Overhead Lines (OH) examination.

Target Groups

Overhead Line Project or Maintenance supervisors with at least four years of working experience who intend to apply for a Chargeman H2 Overhead Lines (OH) certification

Contents

- Electricity Rules, 1999
- Safety Rules for Work on High Voltage Equipment
- Local Earthing
- Pre-Arranged Shutdown Work Practices
- Overhead Manual/Standard Practices

11kV Underground Cable-Jointing

(Previously known as 11kV Underground Cable-Jointing Practices)

E602

3 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge of 11kV underground cables, correct jointing techniques, and safe work practices – preparing them for the EIU Grading of 11kV Cable Jointing examinations.

Target Groups

Technicians with at least five years of experience in underground cable work

Contents

- Cable Jointing Standards, Procedures and Technical Requirements
- Sarawak Energy Electrical Safety Rules and Procedures
- Cable Preparation for 11kV XLPE 95sq mm/3C Cable
- Crimping Ferrules and Lugs
- Stress Control in Polymeric Cable Joints and Terminations
- Cable Testing Requirements

33kV Underground Cable-Jointing

(Previously known as 33kV Underground Cable-Jointing Practices)

E603

3 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge of 33Kv underground cables, correct jointing techniques, and safe work practices – preparing them for the EIU Grading of 33kV Cable Jointing examinations.

Target Groups

33kV cable jointers with at least five years of experience

Contents

- The Construction and Design of Power Cables up to 33kV
- Jointing and Termination Instructions for Underground Cables
- Common Faults and Preventive Measures in Cable Termination and Jointing Methods

Low Voltage Distribution System and Switching

(Previously known as Low Voltage Distribution System Practices and Switching Requirement)

E200

3 Days

Learning Outcomes

By completing this programme, participants will gain a better understanding of Sarawak Energy's low-voltage (LV) distribution system, including the procedures and safety requirements for low-voltage switching.

Target Groups

Electricians and operators with at least one year of experience that is involved in LV switching

Contents

- Statutory Requirements
- Sarawak Energy Electrical Safety Rules
- Sarawak Energy Transmission and Distribution System
- Overhead Lines and Underground Cable Jumpers
- Earthing Overview
- LV Switching at Distribution Pillars
- Safety and Shutdown Practices
- Pillar Testing and Measurements

LV Fuse Switching

(Previously known as LV Fuse Switching Course)

E202

2 Days

Learning Outcomes

By completing this programme, participants will gain a better understanding of the procedures and safety requirements for replacing pillar fuses and pole-mounted fuses in Sarawak Energy's low-voltage (LV) distribution system.

Target Groups

Contractors who are competent persons who have been assigned to carry out work as detailed in a 24-hour standby service contract

Contents

- Statutory Requirements
- Sarawak Energy Electrical Safety Rules and Distribution System
- Measuring Instruments
- LV Pole Mounted Fuses, Pillar, and Cut-Outs
- Standby Services
- Mobile Field Force Automation (MFFA)

Switching for Rural Power Stations

(Previously known as Switching Requirements for Rural Power Stations)

E203

4 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of switching procedures and safety requirements in rural power stations – entitling them to apply for the CAC Switching Authorisation at rural power station interview assessment.

Target Groups

Switching personnel in rural power stations who intend to apply for LV switching certification

Contents

- Street Lighting and LV Distribution Practices
- Major Electrical Equipment and Protection Schemes in Rural Power Stations
- Synchronisation and Parallel Operation of Generators
- System Requirements in Sarawak Energy Power Systems
- Switching Requirements in Power Stations

11kV Switching

(Previously known as 11kV Switching Requirements Course)

E500

4 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge and skills in the operation, control, and protection of distribution substations, switchgears, and transformers – qualifying them to sit for the CAC 11kV Switching Authorisation interview assessment.

Target Groups

Switching personnel who intend to apply for CAC 11kV switching authorisation

Contents

- Electricity Rules, 1999; Sarawak Energy Electrical Safety Rules; and OSHA (Amendment) Act 2022
- Substations and Network Systems Configurations
- Functions, Operations and Faults of a High Voltage (HV) Apparatus
- Protection and Relaying in a Distribution System
- Roles and Responsibilities of Switching Personnel

Switching for Major Power Stations

(Previously known as Switching Requirements for Major Power Stations)

E502

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of switching procedures and safety requirements in major power stations – qualifying them to sit for the CAC Switching Authorisation at major power station interview assessment

Target Groups

Switching personnel in major power stations who intend to apply for switching certification

- Electrical Safety Rules Regarding the Control, Operation and Maintenance of the HV Apparatus
- HV Switchgear and Switching Requirements
- Electrical Protection Systems
- Major Electrical Equipment in Power Plants
- Synchronisation and Parallel Operation of Generators
- System and Switching Requirements

Refresher for Power Station Switching

(Previously known as Refresher Course for Power Station Switching Personnel)

E512

2 Days

Learning Outcomes

By completing this programme, participants will refresh their knowledge of safety rules and requirements for switching operations in power stations, entitling them to renew their switching certification.

Target Groups

Power station switching personnel who intend to renew their switching certification

Contents

- Safety Rules Regarding Control, Operation and Maintenance of the HV Apparatus
- Overview of Major Electrical Equipment and Protection Systems in Power Plants
- Synchronisation and Parallel Operation of Generators
- Equipment Overview
- Station Switching Procedures and Requirements
- System Operations

33kV Switching

(Previously known as 33kV Switching Requirements)

E503

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge and skills in the operation and switching procedures of 33kV switchgears and isolators – qualifying them to sit for the CAC 33kV Switching Authorisation interview assessment.

Contents

- Power System Overview
- 33kV Substation Layout
- SCADA Monitoring and Control
- Protective System for 33kV Equipment
- Switching Practices
- Safety Issues
- Switching Programmes

Target Groups

11kV switching personnel who intend to apply for CAC 33kV switching authorisation

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Refresher for HV Switching

(Previously known as Refresher Course for HV Switching Personnel)

E505

2 Days

Learning Outcomes

By completing this programme, participants will refresh their knowledge of safety rules and requirements for switching operations, equipping them with the necessary understanding to operate new equipment and entitling them to renew their CAC 33kV switching certification.

Contents

- Electrical Safety Rules and Procedures Regarding HV Switching
- Switching Operations for HV Equipment
- Protective Relays in 11kV and 33kV Systems
- Standard Operating Practices for HV Switching
- Safety Briefing and Lessons Learnt

Target Groups

11kV/33kV switching personnel who intend to apply for the renewal of their switching certification

132/275kV Switching

(Previously known as 132/275kV Switching Requirements)

E511

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge and skills in the operation and switching procedures of 132kV and 275kV switchgears and isolators. This programme also serves as the qualifying assessment for CAC 132kV/275kV switching authorisation applications.

Target Groups

Switching personnel who intend to apply for CAC 132/275kV switching authorisation

Contents

- System Overview
- 132/275kV Substation Layout, Equipment and Safety Measures
- Control Panel Alarms and Layout
- Total Blackout Restoration Procedures
- Communication and SCADA Equipment
- Troubleshooting Techniques
- System Synchronisation

Refresher for 132/275kV Switching

(Previously known as Refresher course for 132/275kV Switching Personnel)

E506

3 Days

Learning Outcomes

By completing this programme, participants will refresh their knowledge of 132kV and 275kV switching procedures, entitling them to renew their switching certification.

Target Groups

132/275kV switching personnel who intend to renew their switching certification

Contents

- System Overview
- 132/275kV Substation Layout and Safety Design
- Overview of Equipment Function, Design and Protective System
- Control Panel Alarms and Layout
- Total Blackout Restoration Procedures
- Communication and SCADA Equipment
- Troubleshooting Techniques
- System Synchronisation

Overhead Live Line Work

E222

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge and skills for low-voltage (LV) overhead live-line work, based on Sarawak Energy's approved safety requirements and standard procedures.

Contents

- Types of Live-Line Work
- Live-Line Work Certification
- Requirements for Performing Live-Line Work
- Tools and Materials
- Live-Line Work Procedures

Target Groups

Linesmen who intend to apply for Live-Line Work Certification. They must have a Chargeman L2 certification as well as a minimum of five years working experience on overhead lines

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Street Lighting Maintenance

(Previously known as Street Lighting Maintenance Course)

E514

1 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge and skills in the safe operation, maintenance, and troubleshooting of street lighting installations.

Contents

- Safety Working Procedures and Guidelines
- Street Lighting Types and Construction
- Maintenance and Troubleshooting

Target Groups

On-site street lighting personnel who have attended and passed the E200 Low Voltage Distribution System Practices and Switching

Distribution Protection Control & Instrumentation

E808

2 Days

Learning Outcomes

By completing this programme, participants will gain an overview of protection settings, schemes, and philosophies for distribution networks involving 33kV and 11kV systems. The programme also provides guidelines for 'Isolation and Normalisation,' 'Request for Online Test,' and 'Sanction to Test' activities.

Contents

- Distribution Protection Principles and Schemes
- Request for Online Test and Sanction to Test
- Protection Isolation and Normalisation for Protection, Control, and Instrument (PCI) Works up to 33kV

Target Groups

Distribution Protection and Control and Instrumentation personnel who intend to apply for or renew their CAC PCI Authorisation – Isolation for PCI Works up to 33kV

Transmission Protection Control & Instrumentation

E809

2 Days

Learning Outcomes

By completing this programme, participants will gain an overview of protection settings, schemes, and philosophies for transmission networks with cable systems up to 275kV. The programme also provides guidelines for 'Isolation and Normalisation', 'Request for Online Test', and 'Sanction to Test' activities.

Contents

- Transmission Protection Principles and Schemes
- Request for Online Test and Sanction to Test
- Protection Isolation and Normalisation for PCI Works up to 275kV

Target Groups

Transmission Protection, Control and Instrumentation personnel who intend to apply for or renew their CAC PCI Authorisation – Isolation for Class 1 PCI Works up to 275kV

First Aid

S100

3 Days

Learning Outcomes

By completing this programme, participants will gain knowledge and techniques for emergency first aid treatment – preparing them for the St John Ambulance's First Aid examination.

Target Groups

Personnel who wish to enhance their knowledge in First Aid, including those applying for or renewing competency and authorisation certificates, as well as individuals renewing their First Aid certificates

Contents

- Principles, Priorities and Action in Providing First Aid for Various Emergencies
- Casualty Assessment, Diagnosis of Injury and Illnesses
- Principles of Adult Cardiopulmonary Resuscitation
- Respiratory, Heart and Circulatory Problems
- Treatments for Various Situations and Injuries
- Effects of Extreme Temperatures
- Transportation & Handling of Casualties

Safety Awareness for Working Near Electrical Installations

S200

(Previously known as Safety Awareness Course for Working Near Electrical to Installations)

1 Day

Learning Outcomes

By completing this programme, participants will learn about relevant Occupational, Safety and Health subjects and Safety Awareness elements when working within or near Sarawak Energy's electrical systems, including substations and high voltage overhead lines.

Target Groups

Personnel who are working in or near electrical systems, including substations and overhead lines

Contents

- Occupational Safety and Health (Amendment) Act 2022
- Electrical Injuries and Shock Occurrences
- General Precautions and Safety Measures
- Identification of Various Distribution Systems and Requirements
- Adherence to Various Electrical Statutory Requirements
- Requirements of Relevant Sarawak Energy Contract Specifications

Safety Awareness for Working Near Power Station (Electrical)

S300

(Previously known as Safety Awareness Course for Working Near to Power Stations (Electrical))

1 Day

Learning Outcomes

By completing this programme, participants will learn about relevant Occupational, Safety and Health subjects and Safety Awareness elements when working within or near Sarawak Energy's power stations.

Contents

- Requirements of the Occupational Safety & Health (Amendment) Act 2022
- Requirements of the Electricity Rules 1999
- Sarawak Energy Electrical & Mechanical Safety Rules
- Workplace Hazards

Target Groups

All personnel who are working in or near power stations

Safety Awareness for Working Near 33/11kV Overhead Lines

S401

(Previously known as Safety Awareness Course for Working Near 33/11KV Overhead Lines)

1 Day

Learning Outcomes

By completing this programme, participants will gain knowledge of safety requirements and work procedures to mitigate risks while working on 33/11kV poles in compliance with relevant regulations.

Contents

- Sarawak Energy Electrical Safety Rules
- Identification of 33/11kV/415V Structures
- Safe Working Clearances
- Requirements for Ladder Use
- Pole Top Rescue

Target Groups

Personnel working in the vicinity of 33/11kV overhead lines

Safety Awareness for Working Near EHV Transmission Lines

S402

(Previously known as Safety Awareness Course for Working Near to EHV Transmission Line)

1 Day

Learning Outcomes

By completing this programme, participants will gain an understanding of Occupational Safety and Health principles and develop safety awareness when working around or near Sarawak Energy's Extra High Voltage (EHV) transmission lines.

Contents

- Statutory Requirement
- Sarawak Energy Electrical Safety Rules for Work on High Voltage Equipment
- Potential Hazards & Accidents
- Electrical Injuries
- EHV Equipment for Transmission Lines
- SESCO's Contract Requirements

Target Groups

Personnel with little electrical knowledge who are required to work in proximity to electrical systems, such as near EHV Transmission Lines

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Safety Awareness for Working Near Substations

S500

(Previously known as Safety Awareness Course for Working Near to Substations)

1 Day

Learning Outcomes

By completing this programme, participants will gain an understanding of Occupational Safety and Health principles and enhance their safety awareness when working within or near Sarawak Energy's substations.

Contents

- Substation Layout and Equipment
- Electrical Safety Rules for High Voltage Equipment Work
- Electricity Rules, 1999
- OSHA (Amendment) Act 2022
- Potential Hazards and Accidents
- Contract Specifications

Target Groups

Personnel who work in or near substations

Safety Awareness for Working Near EHV Substation

(Previously known as Safety Awareness Course for Working Near to EHV Substation)

S501

1 Day

Learning Outcomes

By completing this programme, participants will gain an understanding of Occupational Safety and Health principles and safety awareness considerations when working around or near Sarawak Energy's Extra High Voltage (EHV) substations, including associated installations and equipment.

Contents

- Sarawak Energy Electrical Safety Rules for Work on High Voltage Equipment
- Electricity Rules, 1999
- OSHA (Amendment) Act 2022
- Potential Hazards and Accidents
- SESCO Contract Requirements

Target Groups

Personnel with limited electrical knowledge who are required to work in proximity with electrical systems around and near EHV substations

This section is intentionally left blank.

Steam Boiler Operator Training

SBOT

5 Days

Learning Outcomes

By completing this programme, participants will learn about steam boiler operations and related DOSH regulations – becoming eligible for the DOSH steam boiler operator assessment interview.

Contents

- Introduction to Steam Boilers
- Relevant Laws
- Steam Boiler Operations and Troubleshooting
- Boiler Water Treatment
- Steam Turbine and Combustion Fundamentals
- Steam Boiler Maintenance

Target Groups

Technical personnel who are eligible to apply for the DOSH steam boiler operator assessment

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Steam Boiler Operator Revision Workshop

SBORW

2 Days

Learning Outcomes

By completing this programme, participants will learn about steam boiler operations, maintenance, troubleshooting, and relevant DOSH regulations – preparing them for the steam boiler operator examination.

Contents

- Introduction to Steam Boilers
- Laws Related to Steam Boiler Operation
- Steam Boiler Operation and Troubleshooting
- Boiler Water Treatment
- Steam Turbine and Combustion Fundamentals

Target Groups

Technical personnel who are eligible to apply for the DOSH steam boiler operator examination

Low Voltage Main Switchboard Requirement & Testing

E206

2 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of main switchboard installations, testing, and protection requirements.

Contents

- Requirements for the Main-Switchboard (MSB) Room
- MSB Installation Requirements
- Technical Requirements for Inverse Definite Minimum Time (IDMT) Earth Fault Protection
- MSB Testing Requirements

Target Groups

Wiremen, electricians, installation testers, and internal wiring contractors

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Electrical Power System Fundamentals for Non–Technical Personnel

E209

3 Days

Learning Outcomes

By completing this programme, participants will gain a basic understanding of Sarawak Energy's electrical power systems and installations, enhancing their awareness of technical operations within the organisation.

Contents

- Overview of the Sarawak Energy Power System
- Basic Electrical Terminology
- Identification of Basic Electrical Equipment
- Tariff Calculations
- Load Consumption for Appliances
- Calculation of Energy Costs
- Safety Requirements
- Earthing of Installations

Target Groups

Non-technical personnel – particularly front liners – who are interested in the fundamentals of Sarawak Energy's power system

Meter Inspection, Installation and Disconnection

E225

1 Day

Learning Outcomes

By completing this programme, participants will be briefed on the correct approach to meter installations, inspections, and disconnections, with a focus on safety.

Contents

- Electrical Safety Rules for Works on LV Equipment.
- LV Distribution System
- Earthing
- SOP-Aligned Installation Practices
- Meter Inspection
- Disconnection Procedures

Target Groups

Retail technical staff from our Revenue Protection Unit (RPU) and meter installation, inspection, and disconnection teams

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Substation Routine Maintenance

(Previously known as Substation Routine Maintenance Course)

E509

2 Days

Learning Outcomes

By completing this programme, participants will enhance their knowledge of routine maintenance practices for 11kV distribution substations.

Contents

- Sarawak Energy Electrical Safety Rules HV Requirements
- Inspection and Maintenance Standards
- 11kV Substation Routine Maintenance Procedures

Target Groups

Technicians involved in routine substation maintenance

High Voltage Overhead Lines Testing & Commissioning

E406

1 Day

Learning Outcomes

By completing this programme, participants will gain theoretical and practical knowledge of the technical requirements for testing and commissioning high-voltage (HV) overhead lines.

Target Groups

Overhead Lines project supervisors who hold a Chargeman H2 Overhead Lines Competency certification

Contents

- Statutory Requirements
- Sarawak Energy Electrical Safety Rules
- Overhead Construction and Design Manual
- Inspection, Testing and Commissioning Overview
- Phase Sequence Test
- Safety Measures During Commissioning

Introduction to Sarawak Energy Power System Module 2: Cables and Lines

E904

(Previously known as Introduction to Sarawak Energy Power System Module 2: Cables and Lines)

2 Days

Learning Outcomes

By completing this programme, participants will gain an understanding of Sarawak Energy's fundamental principles for the installation, commissioning, operation, and maintenance of underground cables and overhead lines.

Target Groups

Newly recruited engineers and engineering assistants

Contents

- Safety Requirements and Installation Standards
- Power Cable Designs
- Underground Cable Laying Practices
- Cable Preparation
- Common Faults and Preventive Measures in Termination and Jointing Methods
- Stress Control in Polymeric Joints and Terminations
- Pole-Top Rescue Procedures

Note: The introductory course SESCo Power System Module 1: Statutory Requirements has been discontinued, as its content has been integrated into Modules 2 through 4.

Introduction to Sarawak Energy Power System Module 3: Generators and Protection

E905

(Previously known as Introductory Course on SESCo Power System Module 3: Generators and Protection)

2 Days

Learning Outcomes

By completing this programme, participants will gain knowledge of Sarawak Energy's fundamental principles for installing, commissioning, operating, and maintaining generators and protection systems.

Target Groups

Newly recruited engineers and engineering assistants

Contents

- Overview of Generating Sets and Relevant Procedures
- Common Faults, Troubleshooting and Preventive Measures
- Operating Protective Relays
- Protection Schemes
- Fault Level Calculations
- Relay Settings
- Grading of Relays

Introduction to Sarawak Energy Power System Module 4: High Voltage Systems

E906

(Previously known as Introductory Course on SESCo Power System Module 4: High Voltage Systems)

2 Days

Learning Outcomes

By completing this programme, participants will gain an understanding of Sarawak Energy's fundamental principles for installing, commissioning, operating, and maintaining high-voltage (HV) equipment and systems.

Target Groups

Engineers and engineering assistants

Contents

- Sarawak Energy Safety Rules Rev. 2013
- The Electricity Rules, 1999
- HV Switchgears
- Fuse Protection of Medium Voltage (MV) Apparatus
- Repairing and Maintaining Substation Equipment
- Testing Requirements
- HV Faults and Preventive Measures

Appendix 2:
Training Matrix 2026

EIU Electrical Competency Certification

All EIU competencies require participants to pass the **[S100] Basic First Aid and [E309] EOER programmes**. However, these are **not the only prerequisites**. Additional programmes are still required, as detailed in the table below.

Please note that competency applications for '**Chargeman H1 – Voltage Higher Than Low Voltage (HV) Electrical Substation & Auxiliaries**' will also involve an additional interview assessment by the EIU.

Competency Category	Relevant Programme	Relevant Exam	Pre-Requisite/ Conditions
Chargeman L1 – Low Voltage (LV) Main Switchboard & Auxiliaries	E211, E212 and E213	T-A and P-A	Employee only
Chargeman L2 (O/H) – Low Voltage (LV) Overhead Lines & Auxiliaries	E223	T-A2 and P-A2	Employee only
Chargeman L2 (U/G) – Low Voltage (LV) Underground Cable Laying & Auxiliaries	E604	T-LHUG and P-LHUG	-
Chargeman L3 – Low Voltage (LV) Generating Stations	E703	T-L3 and P-L3	Employee with Chargeman L1
Chargeman H1 – Voltage Higher Than Low Voltage (HV) Electrical Substation & Auxiliaries	E521, E522, E523 and E524	T-H and P-H	Chargeman L1 Holder
Chargeman H2 (O/H) – Voltage Higher Than Low Voltage (HV) Overhead Lines & Auxiliaries	E405	T-A3 and P-A3	Chargeman L2 O/H Holder
Chargeman H2 (U/G) – Voltage Higher Than Low Voltage Underground Cable Laying & Auxiliaries	E604	T-LHUG and P-LHUG	-
11kV Underground Cable-Jointing	E602	T-G and P-G	-
33kV Underground Cable-Jointing	E603	T-G33 and P-G33	11kV Cable Jointer

CAC Competency and Authorisation Certification

Before applying for the CAC interview assessment for certain competency and authorisation certifications, you must complete the specific programmes and secure a valid first aid certificate.

For employees, please refer to the CAC Policies, Procedures and Guidelines for further details on the needed programmes.
For non-employees, please refer to the table below for relevant details:

Category	Pre-requisite EIU Certification	Programme Requirements
Low Voltage Substation Equipment	Chargeman L1/ ES/ CEE	E200
High Voltage Substation Equipment	Chargeman H1/ ES/ CEE	-
Low Voltage Overhead Lines	Chargeman L2 (O/H) /ES/ CEE	-
High Voltage Overhead Lines	Chargeman H2 (O/H)/ ES/ CEE	-
Low Voltage Underground Cable	Chargeman L2 (U/G) /ES/CEE	-
High Voltage Underground Cable	Chargeman H2 (U/G) /ES/CEE	-
Low Voltage Power Station Electrical System	Chargeman L3/ ES/ CEE	-
High Voltage Power Station Electrical System	Chargeman H3/ ES/ CEE	-
HV Equipment Testing	EIU CH/ES/CEE	-
HV Cable Jointing up to 11kV	11kV Cable Jointer	-
HV Cable Jointing up to 33kV	33kV Cable Jointer	-
Protection, Control, Instrumentation (Distribution)	Chargeman L1/ES/CEE	E808
Protection, Control, Instrumentation (Transmission)	Chargeman L1/ES/CEE	E809
Fused Cutout Work	Chargeman L1/ WG2/ ES/ CEE	E200
Streetlighting Work	Chargeman L2 (O/H)	E200 and E514
Communication Infrastructure Installation Works	Chargeman L2 (O/H)	E500
LV Live Line Works	Chargeman L2 (O/H)/ ES/ CEE	E222
LV Switching (for non-employees)	Chargeman L1/ L2/ L3/ ES/ CEE/DOSH ICE Driver	E202
Line Vegetation Clearing	-	S401
Routine Compound Maintenance Works Within Substation/Power Station	-	Attend either one of the following: S200, S300, S500, or S501
Civil (or M&E) Works within Substation/Power Station	-	
Patrolling & Guarding Works Within Substation/Power Station	-	
Meter Reading Within Substation/Power Station	-	

EIU Certification Legend

ES – Electrical Supervisor CEE – Competent Electrical Engineer WG2 – Wireman Grade 2

Acknowledgements

Sarawak Energy expresses its gratitude to the Learning & Development and Capability Management team for compiling and organising this directory, as well as the individual departments that supported its development.

Contact Us

This Learning Directory is a live document that is regularly updated to reflect changes to programme details and schedules.

For further enquiries, please reach out to the Learning & Development and Capability Management team via the channels below:

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